

June 2012

## Gerald F. Combs, Jr.

### CONTACT

Grand Forks Human Nutrition Research Center, ARS/USDA  
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### PERSONAL

Languages: English (native), Mandarin (spoken), French  
 International experience: extensive in China and Bangladesh; also India, Nepal, Indonesia, Taiwan, Australia, Egypt, Russia, Canada, Costa Rica and Germany; lectured in 30 countries  
 Interests: American and world history, philosophy, woodworking, gardening, American theatre

### ACADEMIC TRAINING

Ph.D. Nutritional Biochemistry (minors: Biochemistry, Toxicology), Cornell University, Ithaca, NY, 1974  
 M.S. Entomology (minor: Physiology), Cornell University, Ithaca, NY, 1971  
 B.S. Zoology (minor: General Biological Sciences), University of Maryland, College Park, MD, 1969

### EXPERTISE

Dr. Combs' has a wide interest in Agriculture, Nutrition and Health, and particularly in **improving the linkage of food production and human health and well being**. He is internationally recognized as a leader in Nutrition, having published widely and conducted research ranging from fundamental studies with cultured cells and animal models to human metabolic and clinical investigations. He has written two leading text/reference books, The Role of Selenium in Nutrition (Academic Press, 1986) and The Vitamins: Fundamental Aspects in Nutrition and Health (Academic Press, 1992; revised editions 1998, 2007, 2012).

His/his teams' "firsts" include:

- 1<sup>st</sup> US agricultural scientist to work in modern China (five 3-mo. tours, 1980-88 supported by the Chinese Ministry of Agriculture; 15+ subsequent visits)
- chaired 1<sup>st</sup> international scientific meeting held in China: *3<sup>rd</sup> Internat. Symp. on Selenium in Biology & Medicine*, Beijing, China, 1984
- 1<sup>st</sup> to conceive and teach an academic course linking *Agriculture and Human Nutrition* (Cornell University)
- 1<sup>st</sup> to demonstrate anti-carcinogenic efficacy of selenium in humans
- 1<sup>st</sup> to describe endemic rickets in Bangladesh
- 1<sup>st</sup> to conduct a comprehensive study of a *community food system* in a developing country (Bangladesh)
- 1<sup>st</sup> studies of genetic determinants of selenium metabolism in humans
- 1<sup>st</sup> to develop rapid means of measuring selenium in grains; facilitates commodification of high-selenium grains
- 1<sup>st</sup> appointee to the elite USDA Senior Scientific Research Service

His current research addresses the metabolism of selenium in humans, including effects of adiposity. He has conducted research in the US, China and South Asia.

### PROFESSIONAL EXPERIENCE

2004-present Center Director, Grand Forks Human Nutrition Research Center, USDA-ARS, Grand Forks, ND  
 2004-present Professor Emeritus, Division of Nutritional Sciences, Cornell University, Ithaca, NY  
 2011-present Adjunct Professor, School of Food Systems, North Dakota State University, Fargo, ND  
 2005-present Adjunct Professor, Dept Pharm. Physiol. & Therap., UND School Med. & Health Sci., Grand Forks, ND  
 2002-2004 Center Dir. (interagency appointee), Grand Forks Human Nutr.Res. Cent., USDA-ARS, Grand Forks, ND  
 2008-2013 Deputy Director, Great Plains Health Research Consortium, Univ. Nebraska Med. Center, Omaha, NE  
 2002-present Adjunct Professor, Dept of Biochem. & Molecular Biol., Univ. North Dakota School Med. & Health Sci.  
 1999, 2001 Visiting Professor, Institute of Food and Nutrition, University of Costa Rica, San Jose, Costa Rica  
 1996 Visiting Professor, University of Sydney, Sydney, Australia

1995-1998	Director of Graduate Studies, Field of Nutrition, Cornell University, Ithaca, NY
1992-2003	member, Cornell Biotechnology Institute, Food and Nutrition Cluster
1992-2003	Adjunct Professor, Dept. Animal Science, Cornell Univ., Ithaca, NY
1988-2003	Professor of Nutrition, Division of Nutritional Sciences, Cornell Univ., Ithaca, NY
1982-1990	Visiting Professor, Chinese Academy of Agricultural Sciences, Beijing, China
1980-2003	member, Cornell Institute of Comparative and Environmental Toxicology
1980-1988	Associate Professor, Nutrition, Dept. Poultry & Avian Sci. and Div. Nutr. Sci., Cornell Univ.
1975-1980	Assistant Professor, Nutrition, Dept. Poultry & Avian Sci. and Div. Nut Sci. (adjunct), Cornell Univ.
1973-1975	Assistant Professor, Biochemistry & Nutrition, Dept. Poultry Science, Auburn University, Auburn, AL

## ADMINISTRATIVE/LEADERSHIP EXPERIENCE

### Center Director

USDA Grand Forks Human Nutrition Research Center (one of only 6 HNRCs in the USDA intramural research arm, the Agricultural Research Service), 2002-present. Directs all aspects of a major international research center deployed to conduct basic and applied research to elucidate the roles of nutrients, foods and physical activity in human nutrition and health; responsibilities include fiscal, personnel and facilities management and planning. Supervises and coordinates activities of 16 senior scientists with a support staff of 105 permanent employees. Develops and manages an annual budget of ca. \$10-12M. Represents Center in the formulation and implementation of the ARS National Program in Human Nutrition and to local and national ARS collaborators and stakeholders: Liaises with other federal agencies, universities, state and local officials, and various private sector interests to advance the Center's/Agency's missions. Was 1<sup>st</sup> appointee to the USDA Senior Scientific Research Service (is, thus, the only ARS Center Director to maintain an active independent research program). Serves on Undersecretary's Senior Advisory Group; Led Nutrition Team, USDA Global Food Security Taskforce; represents USDA on Indo-US Joint Working Group on Maternal and Child Health; serves as senior executive on ARS Northern Plains Area Labor-Management Forum. Major accomplishments as Center Director:

- conceived and led transition of the Center's research mission from mineral nutrition/metabolism to obesity prevention/obesity biology;
- managed growth of Center's productivity and morale under conditions of stagnant appropriated funding;
- conceived and led internship program for Native American college students at 5 ARS laboratories/Centers.

### Executive Development Training

- Labor-Management Forum Training, Fargo, ND, Jan 2011
- Brookings Training: "Personnel Supervision and Management, 12-hr course, Lincoln, NE, 2011.
- Federal Exec. Development Inst.: "Leading Change", 90-hr course, Shepardstown, WV, 2006; Leadership training for senior executives: human resource management in times of change; communication, team-building, motivation.
- Congressional Briefing Training Course, Washington, DC, Mar, 2003
- Research Performance Evaluation Training Course, 2003
- ARS Leadership Conferences, 2003, 2004, 2005, 2007, 2009
- AgLearn: ca. 62 hrs on-line training, EEO/CR, security, cybersecurity, contract management, 2002-2012.
- Proctor & Gamble, Corp.: "Total Quality Management", 32-hr training for a select group of senior Cornell Professors; TQM principles and applications conducted by P&G senior management, Cincinnati, OH, 1992.
- Teaching Effectiveness Training: College of Agr. & Life Sci. Teaching Effectiveness Workshop, 1990

### Nutrition Team Leader, USG Federal Global Food Security Initiative

Led one of six interagency teams on Undersecretary's (Research, Extension & Education) taskforce on Global Food Security; worked with other teams (Food Production; Natural Resources; Marketing & Policy; Value Chain, Food Loss & Food Safety; Capacity Building) to craft USDA Strategic Plan for Agriculture and Food Security Initiative, 2009-10.

### Director of Graduate Studies

Graduate Field of Nutrition, Cornell University, 1995-99; elected by the faculty; supervised and coordinated activities of three faculty committees (Admissions, Academic affairs, Nominations) and a small support staff (1.5 f.t.e.) for the annual evaluation of some 300 applicants and 120 ongoing graduate students in the Field; coordinated program support of students and their individual faculty advisory committees; served as a liaison between the Dean of the Graduate School, chairs of three academic departments and director of one academic division, and 51 faculty members in four academic units of three colleges. This was the top-ranked graduate Nutrition program in the US.

### Coordinator, Cornell Food Systems for Improved Health (FSIH) Program

Cornell University, 1994-2001; organized bi-weekly meetings of the working group of 20+ faculty members from 6 departments in 3 colleges; managed the a small budget (\$10-15K) allocated from the Cornell International Institute for Food, Agriculture and Development (CIIFAD). This was the first program to bring together academic scientists/scholars interested in food and health.

### **Professor directing a successful research program**

1975-2004 supervised a staff of 1-3 laboratory technicians, 1-4 graduate students, 2-3 undergraduate research aides, 1-2 post-doctoral research associates and a secretary (0.2 f.t.e.); secured/maintained budgetary support for all of these positions and for the laboratory operations (ca. \$200,000-400,000/yr.). This became an internationally recognized program in selenium nutrition/metabolism.

### **Service on faculty committees**

A.R. Mann Library Advisory Committee (chair); Cornell Faculty Library Board; Rice Memorial Collection Committee; CALS Faculty/Staff Diversity Committee; Cornell Animal Welfare Committee (chair); Cornell Pre-Medical Evaluation Committee; faculty Search Committees (Dept Poultry & Avian Sci., Det. Animal Sci., Div. Nutr. Sci.); Graduate Field Admissions Committees (Nutrition, Animal Science, Toxicology).

### **International Coordinator, Sustainable Prevention of Rickets Program Consortium**

1995-2002. Founded and led a consortium (Cornell Univ., Dhaka Univ., UNICEF-Bangladesh, SARPV [a Bangladeshi NGO], Mayo Clinic, Bangladesh Inst. of Maternal and Child Health, Memorial Christian Hospital [Malumghat, Bangladesh], and CIMMYT [Internat. Wheat & Maize Improvement Center]) to develop sustainable means of preventing calcium-deficiency rickets prevalent in southeastern Bangladesh. This effort made rickets visible as a public health problem in South Asia.

### **Chair, Food-Based Approaches to Preventing Micronutrient Malnutrition Workshop**

Salt Lake City, Utah; 1995; conceived idea and generated financial support (ca. \$185,000) for workshop; supervised steering committee in developing programs; directed all logistical arrangements; coordinated press conferences and releases; chaired workshop; edited published proceedings. This effort brought international attention to micronutrient malnutrition as public health problems rooted in agricultural systems.

### **Chair, 3rd International Symposium on Selenium in Biology and Medicine**

Organized 1<sup>st</sup> international scientific conference held in modern China (Beijing, China, 1984); supervised program development; made opening presentation in Mandarin; conducted press interviews; edited published (2-vols, 1138 pp) proceedings. This meeting brought Western and Chinese scientists together for the first time since WWII.

### **PROFESSIONAL HONORS and AWARDS**

Phi Kappa Phi honor society (elected 1973)

Sigma Xi research honor society (elected 1974)

Poultry Science Assoc. Research Award, 1979

Distinguished Nutritionist Award, Distillers' Feed Research Council, 1982

Cited: "Model International Collaboration", Chinese Academy of Agricultural Sciences, 1986

"Meritorious Contributions in Cancer Prevention" award, University of Arizona, 1995

"Outstanding" or "Superior" performance citations, ARS-USDA, 2003, 2004, 2005, 2006, 2007, 2008, 2009, 2010, 2011

Nominee, Athena Award, North Dakota, 2007

Outstanding Poster (with M.I. Jackson), FASEB Summer Res. Conf. on Glucose Transporters, Signaling & Diabetes, 2011:

"Cellular methylation regulates hepatocyte expression of selenoprotein P and gluconeogenic enzymes"

### **ACTIVITIES as CENTER DIRECTOR, GFHNRC**

#### USDA activities

USDA representative to Indo-US Joint Working Group on Maternal and Child Nutrition & Devel. Res., 2006-present

Undersecretary's (for Research, Extension and Education) Senior Advisory Group, 2009-

Nutrition Team Leader, Undersecretary's taskforce to develop USDA Global Food Security Initiative, 2009-10

#### ARS activities

Keynote speaker, ARS/USDA Workshop on Nutritional Enhancement of Plants, Animals and Foods, Houston, May, 2002

Planning Committee, Northern Plains Area Leadership Conference, 2003

Assisted National Program Staff in developing FY05 budget initiative for research to reduce obesity, May 2003

Planned FY06 budget initiative for "National Healthy Communities" program, Feb 2004

Chair, Leadership Conference, Salt Lake City, Apr 2005

ARS Human Nutrition Program National Obesity Prevention Project Planning Workshops, 2006-2007

Conceived and originated ARS Native American Internship Program, 2004-present

#### ARS Leadership Training

Congressional Briefing Training Course, Washington, DC, Mar, 2003

Research Performance Evaluation Training Course, 2003

EEO/CR Training, annually 2002-2012

Security Training, annually 2002-2012  
 Cybersecurity Training, annually 2004-2012  
 ARS National Leadership Conference, New Orleans, Jan 2004  
 ARS Northern Plains Area Leadership Conferences, 2003, 2005, 2007, 2009  
 Labor-Management Forum Training, Fargo, ND, Jan 2011  
 Brookings Institute Supervisory Training, Lincoln, NE Jan 2011

#### Liaison Activities

##### *State of North Dakota*

Founding partner, Healthy North Dakota, ND State Health Commission  
 Founding partner, Creating a Hunger-Free North Dakota Task Force  
 Chair, Health Disparities Committee, Healthy North Dakota Initiative, 2002-2004

##### *University of North Dakota*

University Research Council, 2002-present  
 President's Board of Advisors, 2002-2008  
 Neurosciences Program Steering Committee, UND, 2002-2004  
 Adjunct Professor, Dept of Biochem. & Molecular Biol., Univ. North Dakota School Med. & Health Sci., 2002-present  
 Internal Advisory Committee, Center for Biomedical Research Excellence in Neurosciences, 2003-2008  
 Adjunct Professor, Dept Pharm. Physiol. & Therap., UND School Med. & Health Sci., Grand Forks, ND, 2005-present  
 Search Committees, Dean of Nursing, 2004, 2008; Vice Pres. for Res. & Economic Dev., 2006-2007; Assoc. Dean – Res., School of Medicine & Health Sci., 2007-2008  
 Research Committee, School of Medicine & Health Sciences, 2008-2010  
 Co-PI (w. Dr. Ed Sauter, Assoc. Dean, School of Med & Health Sci.), Model Healthy Community Infrastructure Development Project (2010-2013)  
 ARS representative, Specific Cooperative Agreement with the School of Medicine and Health Sciences, 2011-2016.

##### *Chankdeska Chikana Community College (Spirit Lake Dakota Nation)*

Cooperator in community-based health research

##### *United Tribes Technical College*

Human Subjects Review Committee, 2004-present  
 Research Advisory Committee, 2004-present  
 Cooperator in Native American Internship Program, 2004-2010  
 Cooperator in Cultural Awareness Workshop for ARS employees, 2005-2010

##### *North Dakota State University*

External Reviewer, Nutrition Program, NDSU Cooperative Extension, 2004-2006  
 Advisor to Food Marketing Program, College of Agriculture and Food Systems, 2004  
 Adjunct Professor, School of Food Systems, College of Agriculture and Food Systems, 2011-present

##### *University of Nebraska Medical Center, Omaha*

Executive Committee, Great Plains Health Research Consortium, 2008-2013

##### *University of Minnesota*

Cooperator on Center for Translational Science Award Application, School of Medicine, 2008  
 Research Committee, Grains for Health Foundation, 2008-present

##### *South Dakota State University*

External Advisory Committee, Center for Biomedical Research Excellence in Community Health, 2007-present

##### *Food Industry*

Chair, Nutrition Section, Pulse Health Initiative, US Dry Pea and Lentil Council, 2010  
 Peer Review Panel, Dry Bean Health Research Program, Northarvest Bean Growers Assoc., 2008-present  
 Research Advisory Committee, Grains for Health Foundation, 2009-present

##### *Grand Forks Community*

ARS PI, Specific Cooperative Agreement, Grand Forks Park District, 2009-2014  
 Coalition for a Healthy Greater Grand Forks, 2009-present  
 Planning Committee, Community Health/Fitness Center. Grand Forks Park District, 2010-2011

## **OTHER PROFESSIONAL ACTIVITIES**

### Professional Societies:

American Society for Nutrition (elected 1976): Experimental Animal Nutr. Comm., 1977-81; Nominations Comm. (chair), 1990; Award Juries, 1991 (chair), 1998, 2003-2006; Nutr. Sci. Council, 2007-10; Soc. for Internat. Nutr. Res. (1991)

New York Academy of Sciences (elected 1974)  
 British Nutrition Soc. (elected 1980)  
 Soc. for Experimental Biology and Medicine (elected 1976)  
 American Assoc. for the Advancement of Science (joined 1973)  
 Poultry Science Association (1973-2002); Research Award Committee, 1980-81  
 Internat. Soc. for Trace Element Research in Humans (joined 1998)  
 Internat. Soc. for Medical Geology (joined 2006)

### **Editorial Boards**

Biological Trace Element Research, 1983-2010                      Journal of Optimal Nutrition, 1992-2002  
 Nutrition Reviews, 1982-1992    Journal of Nutrition, 1982-1986  
 Frequent reviewer: J. Nutrition, J. Agric. Food Chem., Nutr. Biochem., Amer. J. Clin. Nutr., Proc. Soc. Exper. Biol. Med.,  
 Nutrition Res., Cancer Preven. & Biomarkers, Nutr. & Cancer, Eur. J. Cancer, Am. J. Epidem.

### **Expert Panels**

Reactor Panel, Diet Nutrition and Cancer Report, NRC/NAS, Washington, D.C.; Dec. 1981  
 Chair, Subcommittee on Vitamin Tolerance, Board of Agriculture & Renewable Res., NRC/NAS, 1984-86  
 NRC/NAS Subcommittee on Vitamin Tolerances, 1985-1986 (chair)  
 Arsenic Technical Panel Workshop, E.P.A.; Baltimore, MD; Dec., 1986  
 American Council on Science and Health, Board of Scientific and Policy Advisors, 1997-present  
 External Review Team, USDA Grand Forks Human Nutrition Research Center, 2000  
 Expert Panel on SELECT Trial Design, NCI, July 1999, Sept 2001  
 International Food and Nutrition Forum, Inst of Medicine, National Academy of Sciences, 2002-03  
 Beans for Health Alliance, Board of Scientific Advisors, 2004-present  
 Expert Review Panel, Dietary Guidelines for Americans, 2004  
 Expert Review Panel, Mineral Tolerances of Animals, Nat. Acad. Sci., 2004-05  
 Blue Ribbon Panel on Groundwater Selenium and Nitrogen, National Water Resources Institute, 2005-2007  
 Scientific Reviewer, NIH ODS Ann. Bibliog. Significant Advancements in Diet Supplements Res., 2004, 2005, 2006, 2007  
 Subcommittee on Military Mineral Nutrition, Nat. Acad. Sci., 2005-06.  
 NIH Special Study Sections: Mineral Metab., 1988, 1991; GCRCs, 1994; Diet - HIV/AIDS, 2007; Global Health, 2007  
 Expert Panel, Dry Grain Pulse CRSP, USAID, 2008  
 Expert Panel, Bioactive Food Factors Program, AFRI, CSREES, 2009  
 Research Advisory Group (Human Nutrition Chair), Pulse Health Initiative, US Dry Pea and Lentil Council, 2010-2012  
 "Thought Leader", Scientists without Borders, 2012-present  
 North Dakota State Diabetes Expert Panel, 2010-present

### **Invited Participation in National Workshops/Conferences**

NSF Conference on Grass-Fed vs. Grain-Fed Livestock Production, Ithaca, NY, Oct 1978  
 Nutrition Council, American Feed Manufacturers Assoc., San Antonio, TX, Nov. 1980  
 Pharmaceutical Industry Workshop on the International Standardization of Vitamin E, 1981  
 NRC/NAS Subcommittee on Vitamin Tolerances, 1985-1986  
 Arsenic Technical Panel Workshop, E.P.A.; Baltimore, MD; Dec 1986  
 International Symposium on Trace Elements in the Food Chain, Nanchang, China, Oct 1992  
 Bristol-Myers Squibb/Mead Johnson Symposium "Beyond Nutritional Recommendations: Implementing Science for Healthier Populations", Washington, DC, June 1995  
 Workshop "New Approaches, Endpoints and Paradigms for RDAs of Mineral Elements", Grand Forks, ND, Sept 1995  
 AAAS Food Systems Symposium, Seattle, Feb 1997  
 Tufts Food Systems Workshop, Boston, MA, March, 1997  
 Pet Food Forum, Chicago, Ill, April, 1998  
 9<sup>th</sup> Gatlinburg Symp., "Plants, Nutrition and Human Health", Knoxville, Tenn., Oct., 1999  
 ARS/USDA Workshop on Nutritional Enhancement of Plants, Animals and Foods, Houston, May, 2002  
 NIH Conference "Vitamin D: Data Needs and Strategies for Achieving Effective Public Policy", Bethesda, MD, Oct., 2003.  
 Amer. Soc. of Horticultural Sci., Colloquium on Genetics, Genomics & Human Nutrition, Providence, RI, Oct. 2003  
 Institute of Food Technology Summit Conference on Roles of Foods in Obesity Prevention, New Orleans, Feb 2004  
 Annual meeting, US Water Quality Association, Las Vegas, May 2005  
 Environmental Systems of Public Health Workshop, NIH, Sept 2008  
 46<sup>th</sup> Annual Conference, Assoc. for International Agriculture and Rural Development, Washington, June 2010  
 Institute of Food Technology Symposium, Las Vegas, Jul 2012  
 Inflammation & Nutrition Science for Program/Policy: Interpretation of Res. Evidence (INSPIRE), Bethesda, Nov 2012

## INTERNATIONAL EXPERIENCE

### as a Researcher

Visiting Scientist, Chinese Acad. Agricultural Sciences, supported by the Chinese Ministry of Agriculture, 1982-1990  
PI, Rickets Prevention in Rural Bangladesh, supported by CIFAD and USAID, 1994-2004

### as a visiting Professor

Chinese Academy of Agricultural Sciences, Beijing, China – 1982-1990  
University of Sydney, Faculty of Agriculture and Environment, Sydney, Australia - 1996  
Institute of Food and Nutrition, University of Costa Rica, San Jose, Costa Rica – 1999, 2001

### as a Research Facilitator

Consultant, Soil Management CRSP (focus: India, Nepal, Bangladesh), Cornell University, 1995-2002  
International Coordinator, Sustainable Prevention of Rickets Program Consortium, 1995-2002  
Gore-Cernamyrdin Commission on Health Workshop on Selenium, Tyumen, Siberia, June, 1998  
Working Group on Nutrient Minerals in Drinking Water and Potential Health Consequences of Long Term Consumption of Desalinated and Other Low Mineral Content Waters, WHO, Rome, Nov. 2003  
Indo-US Joint Working Group on Maternal and Child Health and Development, 2006-present  
Expert Panel, Abu Dhabi Water Quality and Health, 2009-2011  
Steering Committee, Biomarkers of Nutrition for Development (BOND), NICHD-NIH, 2010-present

### as an external doctoral examiner

University of Fribourg (Switzerland), 1980  
University of Guelph (Canada), 1992  
University of Otago (New Zealand), 2000  
University of Sydney (Australia), 2001  
Massey University, Palmerston (New Zealand), 2004  
University of Saskatchewan (Canada), 2008  
Curtin University of Technology (Perth, Australia), 2008-2009  
University of South Australia (Adelaide), 2009  
University of Adelaide (Australia), 2009  
Swiss Federal Institute of Technology (Zurich), 2011

### as a member of International Expert Panels

Chair, Pharmaceutical Industry Workshop on the International Standardization of Vitamin E, 1981  
Joint Working Group, Indo-US Collaborative Program on Maternal and Child Health and Devel. Res., 2003-present  
WHO Working Group, Health Consequences of Long-Term Consumption of Desalinated and Low-Mineral Waters, 2003-06  
Review Team, Dry Grain Pulses CRSP, USAID, 2007  
Research Advisory Group (chair), Biomarkers of Nutrition for Development (BOND) program, NICHD, 2009-2010  
Expert Panel, Abu Dhabi Water Quality, 2009-2011

### as a member of International Conference Organizing Committees

3<sup>rd</sup> Internat. Symp. on Selenium in Biology and Medicine, Beijing, China, Aug 1984  
4<sup>th</sup> Internat. Symp. on Selenium in Biology and Medicine, Tubingen, Germany, July 1988  
Internat. Symp on Trace Elements in the Food Chain, Nanchang, China, Oct. 1992  
5<sup>th</sup> Internat. Symp. on Selenium in Biology and Medicine, Beijing, China, June 1992  
1st Internat. Symp. on Trace Elem. in the Food Chain, Wuhan, PRC, 1990-92  
Chair, Internat. Workshop “Food-Based Approaches to Preventing Micronutrient Malnutrition”, Salt Lake City, Nov 1995  
2nd Internat. Symp. on Trace Elements in the Food Chain, 1997-98  
Chair, Internat. Workshop on Agr. Approaches to Preventable Disability, Dhaka, Bangladesh, Nov, 2000  
6th Internat. Symp. on Metal Ions in Biology and Medicine, Intern. Org. Comm., 2000-02  
9th Internat. Symp. on Metal Ions in Biology and Medicine, Lisbon, May 2006  
Internat. Symp. on Selenium in Health and Disease, Ankara, October, 2006  
WHO Symp. on Health Implications of Minerals in Drinking Water, Washington, DC, March 2006  
9<sup>th</sup> Internat. Symp. on Mineral Ions in Biology and Medicine, Lisbon, May 2006  
7<sup>th</sup> Internat. Symp. on Selenium in Biology and Medicine, Madison, WI, June 2006  
3<sup>rd</sup> Hemispheric Conference of Medical Geology, Valparaiso, 2009  
Biomarkers of Nutrition for Development (BOND) organizational workshop, Vienna, Feb 2010  
3<sup>rd</sup> Internat. Symp. on Trace Elements & Health (Tracel2011), Murcia, Spain, May 2011  
Biomarkers of Nutrition for Development (BOND) 2<sup>nd</sup> workshop, Bethesda, MD, April 2011

Inflammation & Nutrition Science for Program/Policy: Interpretation of Res. Evidence (INSPIRE), Bethesda, Nov 2012  
 Agriculture/Health/Wealth Convergence Workshop, New Delhi, June 1012

**as a Conference Participant**

3<sup>rd</sup> Internat. Symp. on Selenium in Biology and Medicine, Beijing, China, Aug 1984  
 4<sup>th</sup> Internat. Symp. on Selenium in Biology and Medicine, Tübingen, Germany, July 1988  
 Internat. Symp. on Trace Elements in the Food Chain, Nanchang, China, Oct 1992  
 5<sup>th</sup> Internat. Symp. on Selenium in Biology and Medicine, Beijing, China, June 1992  
 3<sup>rd</sup> Internat. Conf. on Trace Elements Health & Disease, Stockholm, May 1992  
 PAMM Workshop on Micronutrient Malnutrition, Papendal, The Netherlands, June, 1994  
 Internat. Workshop "Food-Based Approaches to Preventing Micronutrient Malnutrition", Salt Lake City, Nov 1995  
 6<sup>th</sup> Internat. Symp. on Selenium in Biology and Medicine, Beijing, Aug  
 XII Congreso Latinoamericano de Nutrición, Symposium on "Other Food-Based Strategies Based on Increasing the Intake of Micronutrients: Beyond Salt & Sugar Fortific.", Guatemala City, Nov, 1997  
 Gore-Cernamyrdin Commission on Health Workshop on Selenium, Tyumen, Siberia, June, 1998  
 5<sup>th</sup> Internat. Conf. on Metal Ions in Biology & Health, Munich, Germany, May, 1998  
 German Cancer Society, Berlin, Germany, June, 1998  
 IFPRI Conf. on "Improving Human Nutrition through Agriculture: Role of International Agr. Res.", Los Banos, Oct, 1999  
 National Planning Workshop, Gov't of Indonesia, Jakarta, May 1999  
 2<sup>nd</sup> Internat. Conf. on Food Factors, Kyoto, Japan, December, 1999  
 4<sup>th</sup> Dresden Selenium Symp., Dresden, Germany, May, 1999  
 Nordic Nutrition Conf., Helsinki, Finland, June, 1999  
 Workshop on Chinese Agricultural Development, Chinese Ministry of Agriculture, Yangzhou, China, Aug, 1999  
 Selenium Symp., Jena, Germany, Oct, 1999  
 2<sup>nd</sup> Internat. Conf. on Food Factors, Kyoto, Japan, Dec, 1999  
 7<sup>th</sup> Internat. Symp. on Selenium in Biology and Medicine, Venice, Italy, Oct, 2000  
 Rank Prize Funds Symp., Grasmere, England, Nov, 2000  
 Internat. Workshop on Agricultural Approaches to Preventable Disability, Dhaka, Bangladesh, Nov, 2000  
 Internat. Symp. on Diet and Chronic Diseases, Univ. Costa Rica, San José, CR, Feb., 2001  
 Workshops (2), "Plant Breeding Strategies to Address Micronutrient Malnutrition", CIAT, Cali, Colombia, Jan, Mar, 2001  
 Micronutrient Consultation, Bill and Melinda Gates Foundation, Seattle, July 2001  
 Internat. Nutrition Forum, National Acad. of Sciences, Washington, DC, 2003-2004  
 Working Group on Nutrient Minerals in Drinking Water and Potential Health Consequences of Long-Term Consumption of Desalinated and Other Low Mineral Content Waters, WHO, Rome, Nov. 2003  
 8<sup>th</sup> Internat. Symp. on Metal Ions in Biology and Medicine, Budapest, May, 2004  
 6<sup>th</sup> meeting of the Internat. Soc. for Trace Elements Research in Humans, Banf, Nov 2004  
 Finish Selenium Symp., Ministries of Health and Agriculture, Helsinki, Sept 2005  
 9<sup>th</sup> Internat. Symp. on Mineral Ions in Biology and Medicine, Lisbon, May 2006  
 WHO Symp. on Health Implications of Minerals in Drinking Water, Washington, DC, March 2006  
 Congress on Essential Minerals and Trace Elements, Stuttgart, Sept. 2007  
 Program planning workshops, HarvestPlus, International Food Policy Research Inst., Jan 2007, Mar 2008  
 Environmental Systems of Public Health Workshop, NIH, Sept 2008  
 Pulse Canada Annual Meeting, Winnipeg, June, 2009  
 Biomarkers of Nutrition for Development (BOND) workshop, Vienna, Feb 2010  
 Pulse Health Initiative Workshop, Beltsville, MD, Feb 2010  
 46<sup>th</sup> Annual Conference, Assoc. for International Agriculture and Rural Development, Washington, June 2010  
 Internat. Conf. on Biofortification, Washington, DC, Nov 2010  
 World Food Prize Symposium and Borlaug Dialogue, Des Moines, IA 2009, 2010, 2011  
 Biomarkers of Nutrition for Development (BOND) workshop, Washington, DC, Jun 2011  
 Agriculture/Health/Wealth Convergence Workshop, New Delhi, June 1012

**TEACHING EXPERIENCE**

**Auburn University**

**Animal Science 130 – Animal Nutrition** (Spring, 4 hrs) – 1974. Fundamentals of animal nutrition.

**TEACHING EXPERIENCE** (cont'd)**Cornell University**

Teaching Effectiveness Training: College of Agr. & Life Sci. Teaching Effectiveness Workshop (as instructor)

**Nutritional Sciences 380 - *Integrating Food Systems and Human Nutrition Needs*** (Spring 2 hrs) – each year 1993-2001. Interactive, team-based, research/presentation experience in identifying ways to improve linkages of food systems with nutritional needs of people. (conceived and taught course)

**Nutritional Sciences 604 - *The Vitamins*** (Fall, 2 hrs) - each year 1975-2001. Nutritional aspects of the vitamins, including recent developments in nutritional and biochemical interrelationships of vitamins with other nutrients and drugs. Discussions of medical case reports as exemplars of process of identifying the metabolic bases of vitamin-related functions in health. Wrote textbook, now in its 4<sup>th</sup> revised edition (*The Vitamins: Fundamental Aspects in Nutrition and Health*, Academic Press, 2012).

**Nutritional Sciences 120 - *Contemporary Perspectives in Nutrition*** (Spring 1 hr) - 1991-1994. Presentations by nutrition professionals with guided discussion to provide undergraduate majors in nutrition and other health related fields views of the breadth of disciplines employed in the field of Nutrition. (conceived and coordinated course)

**Nutritional Sciences 659 - *Nutrition and Physiology of the Mineral Elements*** (Spring, alternate years, 2 hrs) 1992-2000. Graduate level lecture course on the nutritional and toxicological aspects of minerals. (co-taught with Dr. Xingen Lei)

**Animal Sciences 230 -- *Poultry Biology*** (Spring, 3 hrs) – 1974-1984 – Avian biology and management for production of meat and eggs. Included weekly laboratory, 2-3 field trips to poultry production and food processing facilities.

**GRADUATE ADVISING**

Auburn University (1973-1975): Graduate Faculty in Animal Science; Majors: 1 Ph.D., 1 M.S.

Cornell University (1975-2002): Graduate Fields: Nutrition, Environmental Toxicology, Animal Science;

Majors: 15 Ph.D., 14 M.S.; Minors: 23 Ph.D., 20 M.S.

University of North Dakota, 2002-2006: committee member: 1 Ph.D. (Nutrition)

North Dakota State University: committee member: 3 Ph.D. (Biochemistry and Molecular Biology, 2005-06; Human Nutrition, 2007-10; Food Systems, 2012-present)

**POST-DOCTORAL TRAINING**

Cornell: 10 post-doctoral fellows, 9 visiting scientists, and 6 professors on sabbatical leaves

USDA: 2 post-doctoral research associates, 1 visiting scientist

**MENTORING**

*Cornell*: Dr. Xingen Lei, Dept. Animal Science

*USDA*: Dr. Eric Murphy, Dept. Pharmacol., Physiol. & Therap., School of Medicine & Health Sci., Univ. North Dakota

Dr. Cindy Anderson, College of Nursing, Univ. North Dakota

Dr. Dil Thavarajah, School of Food Systems, College of Agriculture, North Dakota State Univ.

Dr. Jeff Silverstein, ARS-USDA

Dr. Matt Jackson, ARS-USDA

ARS Native American Intern, each summer 2006, 2007, 2008, 2009

**RESEARCH IMPLEMENTATION** (personal research)***Funding***

Auburn University	Alabama Agr. Expt. Station Alabama Toxicology Laboratories	Gold Kist Poultry, Inc.
Cornell University	NY State Agr. Expt. Station American Chemical Society NIH (2 R01's, 1 P01) USAID Rockefeller Foundation Smith, Kline Beacham, Inc. DeGussa Corp.	Agway, Inc. Monsanto, Inc. USDA (2 grants, 1 specific cooperative agreement) Cornell Internat. Inst. for Food, Agr. & Development Thrasher Foundation Hoffman-LaRoche Corp. BASF Corp.
GFHNRC	Congressional appropriations Congressional earmarks (4) Northwest Bean Growers Minn-Dak Growers US Potato Board	Nat. Cancer Institute US Army Institute for Research in Environmental Medicine North Dakota Beef Commission South Dakota Wheat Commission



*Current Collaborations*

Institut Experimentelle Endocrinol, Berlin	University of North Dakota	National Cancer Institute
University of Nebraska Medical Cntr, Omaha	University of Rhode Island	Emory University
US Army Inst. Res. Environ. Med	University of Copenhagen\	Case Medical School
University of North Carolina	M.D. Anderson Cancer Center	ARS Great Plains Res Lab
ARS Western Human Nutrition Res. Center	University of North Carolina	ARS Southern Plains Res. Lab
Wythe Laboratories	North Dakota State University	Ohio State University National

**INVITED LECTURES/SEMINARS (361 to date):**

- 1975** "Accumulation and Depletion of Low-Level Pesticides in Broilers" Maryland Nutr. Conf., Wash., D.C., Mar  
 "Impact of Mycotoxins in Poultry Feeds" Agway College Poultry Feed Conf. Board, Syracuse, NY; Oct  
 "Problems with Molds and Mycotoxins in Poultry Feeds" Cornell Nutrition Conference, Buffalo, NY; Nov  
 "Impact of Mycotoxins in Poultry Production" Western New York Poultry Producers, Hamburg, NY; Nov
- 1976** "Selenium: Biochemical Functions and Importance in Poultry" Georgia Nutr. Conf., Atlanta, GA; Feb  
 "Biochemical Bases for Nutritional Action of Selenium", Dept. An. Sci., Univ. Georgia, Athens, GA; Feb  
 "Influences of Antioxidants on the Nutritional Value of Selenium" Field of Nutr., Cornell U., Ithaca, NY; Mar  
 "Potentials in Broiler Production" Broiler Business Mag. Elite Nutritionists Roundtable, Wash., D.C.; Mar  
 "Factors Affecting the Utilization of Vitamins D and E in the Chick" Cornell Nutr. Conf., Syracuse, NY; Nov
- 1977** "Modes of Action of Selenium and Vitamin E" Nutrition Seminar, Ralston Purina Co., St. Louis, MO; Feb  
 "Influences of Vitamin A and Reducing Agents on Selenium Function" Distillers Feed Res. Conf., Cincinnati, OH; Mar  
 "Amino Acid Requirements of Broilers" Delmarva Poultry Council, Georgetown, DE; May  
 "Role of Selenium in Poultry Nutrition" Delmarva Poultry Council, Georgetown, DE; May  
 "Nutr. Interrelationships of Selenium and Vitamin E" AIN Symposium on Trace Elements, Chicago, IL; Apr  
 "The Selenium Needs of Laying and Breeding Hens" Cornell Nutrition Conference, Syracuse, NY; Nov
- 1978** "Interrelationships of Nutrition and Disease" AIN Poultry Nutrition Conf., Atlantic City, NJ; April  
 "Nutritional Interrelationships of Selenium and Vitamin E" Gordon Res. Conf. on Food & Nutr., New London, NH; June  
 "By-Product Utilization in Poultry Production" NSF Conf. on Grass- vs. Grain-Fed Livestock Systems, Cornell, Ithaca, NY; Oct  
 "Calcium Homeostasis in Strains Selected for Differences in Eggshell Strength" Cornell Nutr. Conf., Syracuse, NY; Nov
- 1979** "Feeding Least-Cost Diets" Pennsylvania Poultry Federation Conference, Lancaster, PA; Mar  
 "Control of Feed Intake in Poultry - the UGF Effect" Distillers Feed Res. Conf., Louisville, KY; Mar  
 "A Selenium Model System of Periacinar Fibrosis" NIH Wkng Group on Selenium & Cystic Fibrosis, Bethesda, MD; Mar  
 "Review of Selenium in Poultry Nutrition" Hearings, NRC/NAS Subcomm. on Selenium, Wash., DC; Apr  
 "Biochemical Interrelationships of Vitamin E and Selenium", Main Lab., BASF AG, Ludwigshafen, Germany; June  
 "Critique of Selenium in Nutrition" 3rd Int. Symp. on Organo-Selenium and Tellurium Chemistry, Metz, France; June  
 "Biochemical Studies of Mycotoxins in Poultry Nutrition" Agway College Poultry Conf. Board, Syracuse, NY; Oct  
 "Palatability of Poultry Feeds" Cornell Nutrition Conference, Syracuse, NY; Nov
- 1980** "Role of Shell Ultrastructure in Determining Eggshell Quality" Southern Poultry Sci. Mtg, Atlanta; Mar  
 "Factors Influencing the Palatability of Poultry Feeds" Fisheries Symp., Nat. Fish Meal and Oil Assoc., Wash., DC; Mar  
 "Metabolism of Sulfur-Containing Amino Acids in the Selenium-Deficient Chick", Animal Nutr. Res. Council, Wash., DC; Apr  
 "Selenium- and Vitamin E-Related Diseases of Poultry" Roche Seminar, Gainesville, GA; May  
 "Role of Selenium in Pancreatic Function" 2<sup>nd</sup> Internat. Symp. on Selenium in Biology and Medicine, Lubbock, TX; May  
 "Chemistry of Selenium" Hearings, NRC/NAS Subcommittee on Selenium, Washington, D.C.; May  
 "Role of Selenium and Vitamin E in Drug Metabolism" Clin. Toxicol. Seminar, VA Med. Center, Minneapolis, MN; June  
 "Antioxidants in Animal Nutrition" Seminar, Agricultural Chemical Div., Monsanto Co., St. Louis, MO; June  
 "Roles of Selenium and Vitamin E in Drug Metabolism" NIH Wkshp., Rockville, MD; June  
 "Structural and Hereditary Factors That Influence Eggshell Quality", Shaver Poultry Company, Cambridge, Ontario, Canada; June  
 "Assessment of Vitamin E Status in Man and Animals" Nutr. Soc. Ann. Meeting, Glasgow, Scotland; June  
 "Is Cystic Fibrosis Related to Selenium?" Minerals Interest Group, Cornell University, Ithaca, NY; October  
 "Fluorosis in the Laying Hen" Cornell Nutrition Conference, Syracuse, NY; Nov  
 "Vitamin E and Selenium in the Metabolism of Sulfur-Containing Amino Acids", Cornell Nutr. Conf., Syracuse, NY; Nov  
 "Vitamins and Immune Function" American Feed Manufacturers Assn., San Antonio, TX; Nov
- 1981** "Studies of Bone Metabolism in Growing Chickens", S-131 Technical Meeting, Atlanta, GA; Feb  
 "Role of Selenium in Pancreatic Function", Gen. Med., Univ. Missouri Med. School, Columbia, MO; Feb  
 "Selenium in the Protection from Oxidant Drug Toxicity", Univ. Missouri Med. School, Columbia, MO; Feb  
 "The Problem of Eggshell Quality", Seminar in Animal Nutrition, Univ. of Missouri, Columbia, MO; Feb  
 "Mechanisms of Action of Selenium and Vitamin E", Nutrition Emphasis Week, Univ. Missouri, Columbia, MO; Feb  
 "Selenium and Drug Metabolism", Dept Food Chem., Univ. Helsinki, Helsinki, Finland; Mar  
 "Role of Selenium in Glutathione Peroxidase", Seminar, Univ. of Helsinki School of Vet. Med., Helsinki, Finland; Mar  
 "Influences of Selenium on the Metabolism of Foreign Compounds", Anim. Sci. Seminar, Cornell Univ., Ithaca, NY; Mar

- "Role of Selenium and Vitamin E in the Immune Response", NIH Wkshp-Trace Elements & Immunity, Bethesda, MD; Sept
- "What is the Evidence Relating Selenium and Cancer?", Minerals Seminar, Cornell Univ., Ithaca, NY; Oct
- "Bioavailability of Selenium", US-China Selenium Symp., Inst. Health, Chin. Acad. Med. Sci., Beijing, PRC; Nov
- "Role of Selenium in Pancreatic Function", US-China Selenium Symp., Chin. Acad. Med. Sci., Beijing, PRC; Nov
- "Relationship of Selenium and Carcinogenesis", Exp. Carcinogen. Group, Chin. Acad. Med. Sci., Beijing, PRC; Nov
- "Recent Findings in Poultry Nutrition Research", Inst. Animal Sci., Chin. Acad. Agr. Sci., Malianwa, Beijing, PRC; Nov
- "Influence of Diet on the Body Composition of Chicks", Cornell Nutrition Conf., Syracuse, NY; Nov
- 1982** "Endemic Selenium Deficiency in China", Univ. Wisconsin, Madison, WI; Feb
- "Selenium in Human Nutrition in China", Nutrition Program Seminar, Univ. Conn., Storrs, CT; Mar
- "The Role of Selenium in the Nutrition of Man and Animals", Distillers Feed Res. Conf., Louisville, KY; Mar
- "Towards a Metabolic Understanding of the Nutritional Role of Selenium", Univ. Kentucky, Lexington, KY; Mar
- "Influence of Non-Protein Nitrogen on Carcass Composition of Chicks", Nat. Feed Ingrid. Assoc., Des Moines, IA; Mar
- "Vitamin E, Selenium and Sulfur Amino Acids Interactions", Nat. Feed Ingrid. Assoc., Ames, IA; Apr
- "Nutritional and Metabolic Interrelationships of Vitamin E and Selenium", Hoffmann La Roche, Inc., Nutley, NJ; Apr
- "Metabolic Protection Against Oxidant Drugs", Res. Seminar, USDA Human Nutr. Res. Center, Beltsville, MD; May
- "Metabolic Questions Concerning the Utilization of Methionine Analogs", Monsanto Co., St. Louis, MO; May
- "Selenium Deficiency and Excess", Keynote address, Soc. for Environ. Geochem. Health, Augusta, GA, June
- "Factors Affecting the Bioavailability of Selenium for the Chick", Cornell Nutr. Conf., Syracuse, NY; Nov
- 1983** "Animal Agriculture in China", Agricultural Chemicals Group Seminar, Monsanto Co., St. Louis, MO; Mar
- "Relationship of Selenium and Heart Disease", Univ. North Carolina School of Public Health, Chapel Hill, NC; May
- "Potentials for Improving the Efficiency of Animal Protein Production", Monsanto Co., St. Louis, MO; June
- "Animal Model Studies of Selenium Deficiency", FASEB Summer Res. Conf., Saxton's River, VT; July
- "Introductory Remarks", Annual Meeting, Animal Nutrition Research Council, Catonsville, MD; Aug
- 1984** "The Discovery of Vitamin E", lecture to combined nutrition classes; Dept Foods Nutr., Univ. Georgia, Athens, GA; Feb
- "The Recognition of Selenium as an Essential Nutrient", Dept Foods Nutr., Univ. Georgia, Athens, GA; Feb
- "Implications of Vitamin E and Selenium in Health", Nutrition Program, Univ. Georgia, Athens, GA; Feb
- "Studies on the Utilization of Methionine-Active Compounds by the Chick", Monsanto Round Table, Houston, TX; Mar
- "Utilization of Methionine Isomers and Analogs by the Chick", Pacific Northwest Animal Nutr. Conf., Pasco, WA; Oct
- "Roles of Selenium and Vitamin E in the Nutrition of Poultry", Pacific Northwest Animal Nutr. Conf., Pasco, WA; Oct
- 1985** "The Roles of Selenium and Vitamin E in Health and Nutrition", USDA HNRC on Aging, Tufts Univ., Boston, MA; Jan
- "Bioavailability of Selenium in Human Milk", Expert Conf. Selenium, Infant Formula Council, Wash., DC; Feb
- "Roles of Selenium in the Metabolism of Foreign Compounds", NIH Consensus Conference on Strategies Needed to Develop Selenium Compounds as Cancer Chemopreventative Agents, Bethesda, MD; Feb
- "Selenium and Carcinogenesis", AIN Symp. on Selenium and Carcinogenesis, FASEB, St. Louis, MO; April
- "Assessing the Biological Availability of Selenium", Wkshp., Mead Johnson Company, Evansville, IN; May
- "Roles of Selenium and Vitamin E in Animal Nutrition", Taiwan Livestock Res. Inst., Tainan, Taiwan; May
- "Metabolic Functions of Selenium and Vitamin E", National Taiwan University, Taipei, Taiwan, ROC; May
- "Current Research on Selenium and Vitamin E", Chungshing University, Taichung, Taiwan, ROC; May
- "Biopotency of Methionine Analogs", Feed Wkshp., American Feed Council, Nat. Taiwan University, Taipei, Taiwan; May
- "Vitamin and Mineral Supplements for Poultry Feeds", Feed Wkshp, National Taiwan Univ., Taipei, Taiwan, ROC; May
- "An Approach to Determining Selenium Toxicity in Humans", NIH Working Group on Strategies Needed to Develop Selenium Compounds as Cancer Chemopreventative Agents, Silver Spring, MD; Aug
- "History of Vitamin Discovery", Dept Poultry & Avian Sci., Cornell Univ., Ithaca, NY; Sept
- "Selenium and Oxidative Injury", NIH Conf. on Nutr. Diseases: Research in Comp. Pathobiology, Bethesda, MD; Nov
- "Inhibition of Selenium Utilization by Mercaptans", Inst. Health, Nat. Center Prev. Med., Beijing, PRC; Dec
- "Strategies for Satisfying the Micronutrient Needs of Animals", Inst. of An. Sci., Chin. Acad. Agr. Sci., Beijing, PRC; Dec
- "Recent Findings in Poultry Nutrition Research", Inst. of Animal Science, Chin. Acad. of Agric. Sci., Beijing, PRC; Dec
- 1986** "Vitamins in Animal Nutrition", Animal Nutrition Seminar, Beijing Agricultural College, Beijing, PRC; Jan
- "Minerals in Animal Nutrition", Animal Nutrition Seminar, Beijing Agricultural College, Beijing, PRC; Jan
- "Designing Vitamin-Mineral Supplements for Animal Feeds", Shandong Acad. Agr. Sci., Jilin, Shandong, PRC; Jan
- "Optimizing Eggshell Quality in the Laying Hen", Beijing Animal Sci. and Vet. Assn., Beijing, PRC; Jan
- "Recent Studies of the Nutritional Biochemistry of Selenium", Cancer Inst., Chin. Acad. Med. Sci., Beijing, PRC; Jan
- "Current Topics in Applied Poultry Research", Dept. Animal Sci., Shandong Agric. College, Jilin, Shandong, PRC; Jan
- "Biochemical Bases for the Nutritional Essentiality of Selenium", Div. Nutr. Sci., Univ. Ill.s, Urbana, IL; Mar
- "Emerging Needs of Chinese Animal Agriculture", Monsanto Co., St. Louis, MO; Apr
- "Emerging Needs of Chinese Animal Agriculture", Degussa Corp., Teterboro, NJ; Apr
- "The Selenium Requirements of Americans", Dept Poultry & Avian Sci., Cornell Univ., Ithaca, NY; May
- "Selenium in the American Food Supply", Nat. Nutrient Data Bank Conf., Univ. Georgia, Athens, GA; June
- "Nutritional Influences on Oxidant Drug Toxicity", Environ. Tox. Seminar, Cornell Univ., Ithaca, NY; Oct
- "Natural Inhibitors of Selenium-Dependent Glutathione Peroxidase", Cornell Nutr. Conf., Syracuse, Nov
- 1987** "Nicotinamide and Nicotinic for Poultry", Degussa Technical Symposium, Guelph, Ontario, Canada; April

- "Vitamin E- and Selenium-Related Disorders of Livestock", Guelph Nutr.Conf., Guelph, Ont., Canada; Apr
- "Protective Roles of Minerals Against Free Radicals", FASEB-AIN Symp. on Free Radical Damage: Protective Role of Antioxidant Nutrients, Washington, D.C.; Apr
- "Plan for a Diet Assessment Module", Amer. Acad. of Clin. Derm., San Antonio, TX; Dec
- "Roles of Antioxidant Nutrients in Health: Is Selenium Related to Carcinogenesis?" St. Michael's College, Burlington, VT; Dec
- 1988** "Vitamin E- and Selenium-Related Disorders of Animals", Dept. Animal & Poultry Sci., U. Florida, Gainesville, FL; May
- "Understanding the Roles of Selenium and Vitamin E in Health", Pew Lecture, Univ. of Florida, Gainesville, FL; May
- "Assessment of Vitamin E Biopotency", BASF AG, Ludwigshafen, Germany; July
- "Critique of Animal Testing of Nutritional Products", BASF AG, Ludwigshafen, Germany; July
- "In Vivo Inhibition of Selenium-Dependent Glutathione Peroxidase", 4th Intern Symp Se Biol Med, U Tübingen, Germany; Jul
- "Vitamin Tolerances of Livestock", Cornell Nutr. Conf., Syracuse, NY; Oct
- "Coordinating High-Volume Selenium Analyses with Analytical Quality Assurance", Am. Acad. Clin. Dermatol., New Orleans, Dec
- "Assessing Human Selenium Status", Amer. Acad. Clin. Dermatol., Wash., D.C.; Dec
- 1989** "Roles of Selenium and Vitamin E in Health", Nutr. Prog., Clemson Univ., Clemson, SC; Feb
- "Nutritional Prevention of Skin Cancer", Div. Nutr. Sci., Cornell Univ., Ithaca, NY; Mar
- "Understanding the Roles of Selenium and Vitamin E in Health", Nutr. Cluster, Univ. Missouri, Colombia, MO; July
- "Understanding the Roles of Selenium and Vitamin E in Health", Genesee Dietetics Assoc., Rochester, NY, Sept
- "Effects of Selenium and Vitamins E and C on Glutathione Metabolism in the Chick", Cornell Nutr. Conf., Syracuse, Oct
- 1990** "Understanding the Roles of Selenium and Vitamin E in Nutrition and Health", Univ. Arizona, Tucson, AZ, Oct
- "The Metabolism of Selenium", Clinical Invest. Mtg., Nutr. Prev. Skin Cancer Proj., Atlanta, GA, Dec
- 1991** "Selenium in the Prevention of Skin Cancer", Field of Nutrition Seminar, Cornell Univ., Ithaca, NY, Mar
- "Choosing Parameters of Selenium Status", opening address, AIN Symp. Assessment of Se Status, Atlanta, GA., Apr
- "Experiences in the Use of Concept Maps in Teaching The Vitamins", College of Agr. & Life Sci. (Cornell) Teaching Effectiveness Workshop, Casanovia, NY, June
- "The Year in Selenium Research", Safety Monitory & Adv. Comm., Nutr. Prev. Skin Cancer Project, Rochester, NY, Dec
- 1992** "The Selenium RDA and RfD Dichotomy", EPA Workshop Risk Assessment of Essential Elements, Herndon, VA, Mar
- "Biochemical Bases for the Nutritional Function of Selenium", Dept Human Nutr., U.Texas, Austin, TX, Mar
- "Selenium Research: The Next Horizon", opening address, AIN Symp., Anaheim, CA, Apr
- "Linking Production Agriculture and Human Nutrition", Nat. Agr. Res. and Extension Users' Adv. Board, Ithaca, NY, May
- "Essentiality and Toxicity of Selenium: the RDA and RfD", 3<sup>rd</sup> Internat. Conf. Trace Elements Health & Dis, Stockholm, May
- "Selenium Status as a Risk Factor for Colon Cancer", 5th Internat Symp. Se in Biology and Medicine, Nashville, TN, July
- "Vitamin Tolerances of Animals", Takeda Tech. Symp., Minnesota Nutr. Conf., Minneapolis, MN, Sept
- "Vitamin E and Selenium in the Nutrition of Poultry", Minnesota Nutr. Conf., Minneapolis, MN, Sept
- "Contributions of Animal Products to the Vitamin Intakes of Americans", Cornell Nutr. Conf., Rochester, NY, Oct
- "Risk Assessment of Trace Elements", Environ. Toxicology Seminar, Cornell Univ., Ithaca, NY, Oct
- 1993** "The Role of Selenium in Pancreatic Function", Field of Nutrition Seminar, Cornell Univ., Ithaca, NY, Feb.
- "Factors Affecting the Bioavailability of Selenium", Inst. Anim. Sci., Chin.Acad.Agr.Sci., Beijing, PRC, May
- "Factors Affecting the Bioavailability of Selenium", Shandong Prov. Acad. Med. Sci., Jilin, Shandong, PRC, May
- "Interrelationships of Vitamin E and Selenium in Nutrition and Health", Shandong Acad. Med. Sci., Jilin, May
- "The Nutritional Importance of Selenium", Res. Grand Rounds, Bassett Hosp., Cooperstown, NY, June
- "Assessing the Role of Selenium in Cancer Prevention", Massee Lecture, Univ. ND Med. School, Grand Forks, ND, Oct
- "Dietary Selenium in the Etiology of Colorectal Cancer", USDA Human Nutr. Res. Center, Grand Forks, ND, Oct
- "The Role of Selenium in the Health of the Hindgut", Cornell Nutr. Conf., Rochester, NY, Nov
- 1994** "Diet and Health: the Colon Cancer Example", Alpha Epsilon Delta, Cornell Univ., Ithaca, NY, Feb
- "Roles of Vitamin E and Selenium in Nutrition", "From Carrots to  $\beta$ -Carotene: Agriculture and Health Implications of Increasing Plant Foods in Diets of New Yorkers" extension in-service training conf., Cornell Univ., Ithaca, NY, June
- "Selenium in Cancer Chemoprevention", Diet and Cancer Prev. Acad. Course, NCI, Rockville, MD, Aug
- "The Role of Selenium in Nutrition", Delmarva Poultry Industry annual mtg, Ocean City, MD, Oct
- "Nutritional Essentiality: a Changing Paradigm", Cornell Nutr. Conf., Rochester, NY, Oct
- "Recent Findings Concerning Anti-Cancer Activities of Selenium", Labor Protection Inst., Gejiu, Yunnan, China, Dec
- "Selenium Nutrition of Animals and Humans", An. Sci. Res. Inst., Chin. Acad. Agr. Sci., Beijing, China, Dec
- "Relationships of Selenium and Health", Food Industry Meeting, Chin. Acad. Agr. Sci., Beijing, China, Dec
- 1995** "What the Chicken Taught Me About Cancer", Animal Nutrition Seminar, Cornell Univ., Ithaca, NY, Jan
- "Rationale for a Combined Iodine-Selenium Intervention", Internat. Nutr., Cornell Univ., Ithaca, NY, Feb
- "Fighting 'Hidden Hunger' Through Sustainable, Food-Based Systems", Plant Biology Seminar, Cornell Univ., Ithaca, Feb
- "Evaluating the Anti-Carcinogenic Potential of Selenium", Grand Rounds, Bassett Hospital, Cooperstown, NY, Mar
- "Selenium", Cancer Prevention and Control Academic Course, National Cancer Inst., Rockville, MD, Aug
- "Should Intakes with Beneficial Actions, Often Requiring Supplementation, be Considered for the RDAs?", Workshop on New Approaches, Endpoints and Paradigms for Recommended Dietary Allowances (RDAs) of Mineral Elements, Grand Forks Human Nutrition Research Center, Sept

- "Emphasizing Fruits and Vegetables in American Diets: Implications for Vitamin and Mineral Intakes", Cornell Nutr. Conf., Rochester, NY, Oct
- "Potential for Reducing Cancer Risk in Older Americans by Nutritional Supplementation with Selenium", Research Grand Rounds, VA Med. Center, Minneapolis, Sept
- "Purpose of the Workshop", Cornell/Thrasher Workshop "Food-Based Approaches to Preventing Micronutrient Malnutrition", Salt Lake City Nov
- "Food-Based Approaches to Preventing Micronutrient Malnutrition: Outcomes of an International Workshop", Cornell Internat. Inst. Food, Agr. Devel. Adv. Comm. Meeting, Ithaca, NY, Nov
- "Food-Based Approaches to Preventing Micronutrient Malnutrition: Outcomes of an International Workshop", Field of Nutrition, Cornell Univ., Ithaca, NY, Dec
- 1996**
- "Making Nutrition Trans-Disciplinary", Interdepartmental Nutrition Program, Univ. Arizona, Tucson, AZ, Feb
- "Selenium Reduces Cancer Risk", Field of Nutrition, Cornell Univ., Ithaca, NY, Feb
- "Developing Sources of Selenium for Cancer Chemoprevention", Boyce Thompson Inst. Bd. of Directors, New York, Feb
- "Cancer Chemopreventive Effects of Selenium Supplements", Field of Animal Sci., Cornell Univ., Ithaca, NY, Apr
- "Evidence for Cancer Chemopreventive Effects of Nutritional Supplements of Selenium", TEMA, Banff, Canada, May
- "Importance of Food-Systems Thinking for Sustainable Solutions to Malnutrition", Univ. Sidney, Sidney, Australia, June
- "Role of Selenium and Vitamin E in Cancer Chemoprevention", Univ. of Sydney, Sidney, Australia, June
- "Policy Implications of Beneficial Actions of Supra-nutritional Intakes of Nutrients", Univ. Sydney, Sidney, Australia, June
- "Risks and Benefits of Selenium", National Food Authority Seminar, Canberra, Australia, June
- "Selenium", Cancer Prevention and Control Academic Course, Nat. Cancer Inst., Rockville, MD, Aug
- "Cancer Chemoprevention by Selenium - Implications to Food Engineering", Chin Acad. Agr. Sci., Beijing, Aug
- "Food-Based Approaches to Preventing Selenium Deficiency in China", Pang Tai Mills, Inc., Qinhuangdao, China, Aug
- "A New Approach to Considering Dietary Needs for Selenium", wkshp on Selenium Allowances, Beijing, Aug
- "Clinical Evidence for Cancer Chemopreventive Effects of Nutritional Supplements of Selenium", 6<sup>th</sup> Internat. Symp. Selenium in Biol. Med., Beijing, Aug
- "Implications to Vegetable Production of Anti-Cancer Roles of Selenium", Dept Fruit & Veg. Sci., Cornell Univ., Ithaca, Sept
- "Focusing Food Systems to Improve Health", Dept Food Sci., Cornell Univ., Ithaca, NY, Oct
- "Can Selenium Reduce Cancer Risk?", Nutrition Seminar, Penn. State Univ., State College, PA, Oct
- "Thinking in Terms of Food Systems", Cornell Nutr. Conf., Rochester, NY, Oct
- "What Does 'Nutritional Essentiality' Really Mean?" Pet Food Inst., Chicago, IL, Nov
- 1997**
- "Selenium in Your Diet", Rotary Club, Lansing, NY, Jan
- "Findings Concerning Colon Cancer-Protection by Selenium", Bayer Pharmaceuticals, New Haven, CT, Feb
- "Questions Concerning the Potential of Food-Systems Approaches to Improve Health", AAAS Symp. "Creating a Healthful Food System: Linking Agriculture to Human Needs", Seattle, WA, Feb
- "Antioxidant Nutrients and Cardiovascular Disease Risk", Oneonta Heart Conf., Oneonta, NY, Mar
- "Taking Systems Approaches to Diet and Health", Tufts Food Systems Workshop, Boston, Mass, Mar
- "Opening Remarks", 3<sup>rd</sup> Dresden Symp. on Selenium, Dresden, Germany, May
- "Prevention of Cancer with Selenium Supplementation", 3rd Dresden Symp., Dresden, Germany, May
- "Selenium and Cancer: Cornell's Role in the Discovery and Development of a Cancer Preventive Nutrient", Kinzelberg Hall Dedication, Cornell Univ., Ithaca, NY, June
- "Nutritional Outcomes of Rice-Wheat Based Agriculture", Bangladesh Agr. Res. Center, Joydipur, Bangladesh, June
- "Opportunities Offered by Agriculture to Improve Nutritional Status", Rice-Wheat Consortium, Pokhara, Nepal, June
- "Identification of Selenosis", Punjab Agr. Univ., Ludihana, India, June
- "Selenium", Cancer Prevention and Control Acad. Course, Nat. Cancer Inst., Rockville, MD, July
- "Selenium and Cancer Prevention", Council on Responsible Nutrition, Dana Point, CA, Sept
- "Considering Health Claims for Selenium: Risks and Benefits", Environ. Tox. Seminar, Cornell Univ. Sept
- "Selenium in Nutrition and Health", Dept Nutrition, Univ. of Connecticut, Storrs, CT, Oct
- "Addressing Diet-Related Health Problems of Americans", symposium "Improving Food Systems", Am. Societies of Agronomy, Crop Sci. and Soil Sci., Anaheim, CA, Oct
- "Cancer Prevention with Selenium", symposium on Selenium in Medicine, Baden-Baden, Germany, Nov.
- "Food-Based Strategies to Increase Micronutrient Intake", symposium on "Other Food-Based Strategies Based on Increasing the Intake of Micronutrients: Beyond Salt & Sugar Fortific.", XII Congresso Lantinamericano de Nutrición, Guatemala City, Nov
- 1998**
- "Opportunities in International Nutrition", Cornell Univ. Assoc. of Internat. Agr. Students, Ithaca, NY, Feb
- "Considering Nutrient Needs: Adequate vs. Optimum", Pet Food Forum, Chicago, Apr
- "Harnessing the Power of Food Systems to Improve Health", Cornell Food Sci. Adv. Board, Ithaca, NY, April
- "Role of Selenium in Anti-Carcinogenesis", 5<sup>th</sup> Internat. Conf. on Metal Ions in Biology & Health, Munich, Germany, May
- "Cancer Prevention with Selenium", German Cancer Soc., Berlin, Germany, June
- "Role of Selenium in Cancer Prevention", US-Russian workshop on selenium, Tyumen, Russia, June
- "Selenium", Cancer Prevention and Control Acad. Course, Nat. Cancer Inst., Rockville, MD, July
- "Cancer Risk Reduction by Selenium", Univ. Joseph Fourier, Grenoble, France, Sept
- "Food-Based Approaches to Preventing Micronutrient Deficiencies" Internat. Soc. Trace Elem. Res. Humans, Lyon, France, Sept

- "Efficacy of Selenium in Cancer Prevention", 5<sup>th</sup> Internat. Soc. Trace Element Res. in Humans, Lyon, France, Sept
- "Recent Findings about Selenium in Health Maintenance", Cornell Nutr. Conf., Rochester, NY, Oct
- "Re-Defining Essentiality: Changing the Nutrition Paradigm", Food Sci., Cornell Univ., Ithaca, NY, Dec
- "Re-Defining Essentiality: Changing the Nutrition Paradigm", Hill's Sci. Center, Topeka, Kansas, Dec.
- 1999**
- "The Biology of Rickets", Bangladesh Rickets Consortium 2<sup>nd</sup> Meeting, Dhaka, Bangladesh, Jan
- "The role of selenium in cancer prevention", US Plant, Soil and Nutrition Lab., Ithaca New York, Feb,
- "The role of selenium in cancer prevention", Dept Food & Nutr., Purdue Univ., West Lafayette, Indiana, Mar
- "Micronutrient Needs", ASNS Forum on Micronutrients, Exp. Biology '99, Washington, DC, Apr
- "Using the food system concept to link agriculture and health agendas", Nat. Planning Wkshp, Govt of Indonesia, Jakarta, May
- "Chemopreventive mechanisms of selenium", 4<sup>th</sup> Dresden Selenium Symposium, Dresden, Germany, May
- "The role of selenium in cancer prevention", Nordic Nutr. Conf., Helsinki, Finland, June
- "Relationships of Micronutrients and Cancer Risk", Univ. Costa Rica, San José, Costa Rica, July
- "Relationships of Micronutrients and Cardiovascular Disease Risk", Univ. Costa Rica, San José, Costa Rica, July
- "The RDA and the Nutritional Essentiality Paradigm", Univ. Costa Rica, San José, Costa Rica, July
- "Food-Based Approaches to Improving Micronutrient Intakes", Escuela Nutricion Humana, Univ. Costa Rica, San José, July
- "Selenium and Cancer Prevention" Cancer Prevention and Control Acad. Course, Nat. Cancer Inst., Rockville, MD, July
- "Agriculture as an Implement for Improving Child Survival: the Rickets in Bangladesh Case", USAID, Washington, DC, July
- "Role of Selenium in Human Health", Tian Ma Group, Tianjin, China, Aug
- "Agriculture as a Means of Improving Health", Planning Wkshp for Chin. Agr. Dev., Yangzhou, China, Aug
- "Considering the Mechanisms of Cancer Prevention by Selenium", Am. Inst. Cancer Res., Washington, DC, Sept
- "An Element in Cancer Prevention", Grand Rounds, Wilson Hospital, Binghamton, NY, Sept
- "Food Systems Approaches to Improved Health", 7<sup>th</sup> Gatlinburg Symp., Knoxville, Tenn., Oct
- "Preventing Rickets by Food-Based Approaches: Inventing a New Paradigm", Cornell Univ., Ithaca, NY, Nov
- "Chemopreventive Mechanisms of Selenium", Selenium Symp., Jena, Germany, Oct
- "Food-Based Approaches to Improving Micronutrient Malnutrition: Selenium", 2<sup>nd</sup> Int. Conf. Food Factors, Kyoto, Japan, Dec
- 2000**
- "An Element of Cancer Prevention", Med. Grand Rounds, Wilson Hospital, Binghamton, NY, Feb
- "Selenium in Cancer Prevention", Med. Grand Rounds, Louisiana State Univ. Med. School, New Orleans, LA, Feb
- "Vitamin D, Calcium and Rickets in the Tropics", Nutri. Problems in Developing Nations, Cornell Univ., Ithaca, Mar
- "Selenium in Cancer Prevention", Univ. Illinois-Chicago, Chicago, June
- "An Analysis of Cancer Prevention by Selenium" 7<sup>th</sup> Internat. Symp. on Selenium in Biol. and Med., Venice, Italy, Oct
- "Roles of Selenium and Vitamin E in the Nutrition of Poultry and Swine", Rank Prize Funds Symp., Grasmere, England, Nov
- "An International Perspective on Rickets", Internat. Workshop on Agr. Approaches to Preventable Disability: the Case of Rickets in Bangladesh, Dhaka, Nov
- 2001**
- "Food Systems Approaches to Preventing Micronutrient Malnutrition in the Developing World", Workshop on Plant Breeding Strategies to Address Micronutrient Malnutrition, Centro Internac. Agric. Tropica, Cali, Colombia, Jan
- "A Problem-Based Approach to Addressing Micronutrient Needs by Plant Breeding", Follow-up Workshop on Plant Breeding Strategies to Address Micronutrient Malnutrition, Centro Internac. Agric. Tropica, Cali, Colombia, Mar
- "All That Glitters May Not Be Gold: Case Study in Biotechnology for Improved Micronutrient Nutrition", Cornell Univ., Ithaca, NY, Apr
- "Arsenic Impact on the Food Chain on Human Health", UNICEF Expert Grp on Arsenic, Nutr & Food Chain, Dhaka, May
- "Relevant Science: Perspectives on Mineral Research and the GFHNRC", Grand Forks HNRC, Grand Forks, ND, Aug
- "Needs for Calcium-Rich Foods in Developing Countries", Cornell Nutr. Conf., Rochester, NY, Oct.
- "Role of Selenium in Prostate Health", University of Guelph, Guelph, Ontario, Nov
- "Improving Plants for Improved Human Health", Plant Breeding Seminar, Cornell Univ., Ithaca, Nov.
- 2002**
- "Role of Selenium in Cancer Prevention" School of Medicine, University of North Dakota, Grand Forks, Jan.
- "Rediscovering Rickets", University of North Dakota Sigma Xi, Grand Forks, Feb.
- "Role of Selenium in Cancer Prevention" American Academy of Dermatology, Annual Meeting, New Orleans, Febr.
- "Bridging the Agriculture-Health Gap", ARS Wkshp on Nutri. Enhancement of Plants, Animals & Foods, Houston, May
- "Progress in Rickets Prevention Research", USAID Mission, Dhaka, Bangladesh, June
- "Toward a Healthy Agriculture", North Dakota Dept. of Agriculture, Bismarck, Jul.
- "Opportunities for Healthy Eating", Healthy North Dakota Summit, Bismarck, Aug.
- "Addressing Arsenicosis in Bangladesh", Internat. Soc. for Trace Element Res. in Humans, Quebec, Sept.
- "Preventing Cancer with Selenium", Plenary lecture, Internat. Soc. for Trace Element Res. in Humans, Quebec, Sept.
- "Role of Selenium in Cancer Prevention", Dept. Animal and Range Sciences, North Dakota State Univ., Fargo, Sept.
- "This is the Grand Forks Human Nutrition Research Center", Grand Forks City Council, Grand Forks, ND, Oct.
- "Re-emergence of Rickets", Greater Grand Forks Dietetics Association, Grand Forks, ND, Nov.
- "The Nutrition Link to Agriculture at the Grand Forks Human Nutrition Research Center", ND Agr. Coalition, Bismarck Nov.
- "Role of Selenium in Cancer Prevention", Univ. of Manitoba, Winnipeg, MB, Nov.
- 2003**
- "Efficacy of a calcium supplement in preventing rickets in Bangladesh", Calcium Bd., GlaxoSmithKline, Morristown, NJ, Mar
- "Contributions of animal nutrition to human health: the selenium story", Maryland Nutr. Conf., College Park, Mar
- "The Nutrition Link to Agriculture", NDSU Cooperative Extension In-Service, Fargo, Apr.
- "This is the Grand Forks Human Nutrition Research Center", North Dakota State Univ. Coop. Exten. Annual Conf., Fargo, Apr

- “Bridging the Ag-Health Gap”, National Agricultural Marketing Assoc., Grand Forks, ND., Apr.
- “Opportunities for a Healthy Foods Initiative”, National Program Staff, ARS, USDA, Beltsville, MD, May
- “Food and Health: Role of the Grand Forks Human Nutrition Res. Center”, Optimists Club, Grand Forks, ND., June
- “Bridging the Ag-Health Gap”, Midwest section, National Agriculture Directors’ Assoc., Grand Forks, ND., July
- “Capturing Health & Economic Opportunities for the Dakotas: Sorting Grains by Selenium Content”, UND, Grand Forks, Aug
- “New Progress in Trace Elements: Born and Selenium”, Council for Responsible Nutrition, Tucson, Sept.
- “Improved crop nutritive value: A panacea for world hunger?” Keynote address, Amer. Soc. Hort. Sci., Providence, R.I. Oct.
- “Opportunities for Developing Healthy Foods”, Kellogg Inst. for Food & Nutrition Res., Battle Creek, MI, Oct.
- “Vitamin D: a Global Perspective”, NIH conf. Vitamin D and Health in the 21<sup>st</sup> Century: Bone & Beyond, Bethesda, MD, Oct.
- “Essential Minerals in Water”, WHO working group on desalinization, Rome, Nov.
- “Mineral Elements Related to Cardiovascular Health”, WHO working group on desalinization, Rome, Nov.
- “This is the Grand Forks Human Nutrition Research Center”, Kiwanis Club, Grand Forks, ND, Dec.
- 2004** “A Dakota Diet”, Marketplace of Ideas, Grand Forks, ND, Jan
- “Health: An Attribute of North Dakota Crops?”, Northwest Farm Managers Assoc., Fargo, ND, Feb
- “Scientific Evidence on Selenium and Cancer”, Amer. Soc. Nutritional Sci. Symposium “Nutrient Disease Relationships: Closing the Scientific Knowledge Gap”, Washington, DC, Apr.
- “Selenium in the American Food System: Implications for Cancer Prevention”, Amer. Soc. Nutr. Sci. Symp., Wash., DC, Apr
- “Nutritional Roles of Minerals”, AFIP Short-Course in Medical Geology, Budapest, Hungary, May
- “Role of Selenium in Cancer Prevention”, Opening Address, 8<sup>th</sup> Internat. Symp. Metal Ions in Biol. and Med., Budapest, May
- “Phytonutrients, Foods and Health”, USDA-Chinese Ministry of Science and Technol. Planning wkshp, Los Angeles, CA, July
- “Role of Selenium in Cancer Prevention”, Medical Grand Rounds, Altru Health System, Grand Forks, Oct
- “Opening Remarks”, Hunger in the Heartland Conference, Grand Forks, Oct
- “Role of Selenium in Cancer Prevention”, Midwest Selenium Conference, Grand Forks, Nov.
- “Safety of High-Selenium Foods”, Midwest Selenium Conference, Grand Forks, Nov.
- “Considering Chemical Speciation in Assessing Trace Element Bioavailability: the Case of Selenium”, Internat. Soc. Trace Element Research in Humans, Bangkok, Nov.
- 2005** “Developing high-selenium foods”, Dept. of Animal and Range Sciences, North Dakota State University, Fargo, ND, Jan
- “Considerations from Selenium Metabolism: Towards Informed Assessment of Selenium Status”, Dept. of Physiology, Pharmacology and Therapeutics, Univ. North Dakota School of Medicine and Health Sci., Grand Forks, ND, Jan
- “A Dakota Diet”, Research Day, Great Plains Research Laboratory, Mandan, ND, Feb
- “The Role of Water as a Source of Essential Minerals”, Water Quality Association, Las Vegas, NV, Mar
- “Assessment of Selenium Status”, North Dakota Medical Technologists Assoc., Grand Forks, ND, April
- “Dakota Diet – an Approach to Marketing ‘Health’ and ‘Local’”, NDSU Cooperative Extension, Minot, ND, May
- “This is the Grand Forks Human Nutrition Research Center”, Grand Forks Retired Teachers Assoc., Grand Forks, ND, May
- “Health as a Marketing Strategy”, Assoc. of Midwest Agricultural Economists, Las Vegas, NV, Jun
- “Importance of Selenium to Human Nutrition”, Twenty Years of Selenium Fertilization: Workshop, Helsinki, Sept.
- “Assessment of Iron Status”, Contributors to Neonatal and Infant Morbidity and Mortality Workshop, Chandigarh, India, Sept.
- “Health Roles of Foods Produced in North Dakota”, US Dry Bean Council, Fargo, ND, Oct.
- “Opportunities for Improving Health through Enhancing Mineral Contents of Foods”, Yara workshop, Oslo, Oct.
- “Marketing Health: a Dakota Diet”, Bismarck-Mandan Dietetic Assoc., Bismarck, ND, Oct.
- “Healthful Eating Tips for Older, Active Men”, Grand Forks Men’s Club, Grand Forks, ND, Oct.
- “Fish as a Source of Selenium”, Univ. Maryland Center for Food, Nutr. and Agr. Policy Roundtable, Washington, DC, Nov.
- 2006** “Dry Beans and the Trend in Whole Foods”, Bean Day 2006, Northharvest Bean Growers Assn., Fargo, ND, Jan
- “Selenium Studies”, East Grand Forks Senior Citizen Center, East Grand Forks, MN, Feb.
- “The Role of Selenium in Reducing Cancer Risk”, Nutrition Seminar, South Dakota State University, Brookings, SD, Mar
- “Role of the USDA in Researching Questions of Diet and Health”, Grand Forks Rotary Club, Grand Forks, April
- “Indications of Calcium and Magnesium Deficiency in Populations”, WHO/ILSI Conference on Calcium and Magnesium in Cardiovascular Health, Baltimore, April
- “Determining Healthful Intakes of Selenium”, 9<sup>th</sup> Internat. Sympos. on Metal Ions in Biology and Medicine, Lisbon, May
- “Role of Selenium in Health and Disease”, Internat. Symposium on Selenium in Health and Disease, Ankara, Turkey, Oct
- “Role of Selenium in Cancer Prevention”, Internat. Symp. on Selenium in Health and Disease, Ankara, Turkey, Oct
- 2007** “Opportunities for biofortified crops for improving nutritional status of Americans and overseas populations”, ARS Harvest Plus mtg, Beltsville, MD, Jan
- “Potential of high-selenium foods in cancer prevention”, Healthy and Functional Foods Conference, Hettinger, ND, Jan
- “Opportunities for high-selenium wheat in cancer prevention”, Wheat Quality Council, Kansas City, MO, Feb
- “Are there Risks Associated with Supranutritional Selenium?”, Congress on Essential Minerals, Stuttgart, Sept.
- “Addressing National Needs in Human Nutrition: the GFHNRC Research Program”, Univ. North Dakota, Grand Forks, Oct.
- 2008** “Considering Selenium in Three Dimensions: Nutritional, Anti-Cancer and Toxicological”, Univ. Saskatoon, Saskatoon, Mar
- “Implications of Biofortification for Industrialized Countries”, planning workshop, HarvestPlus, IFPRI, Washington, Mar
- “Role of Selenium in Cancer Prevention”, VA, Fargo, May
- “Obesity Prevention Research at the Grand Forks Human Nutrition Research Center”, Healthy North Dakota Planning Group, Bismarck, ND, Sept.

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|      | <p>"Diet and Nutrition in Rural America", Midwest Obesity Summit, Grand Forks, ND Sept.</p> <p>"Opportunities for developing high-Se cancer, wheat-based foods for cancer prevention", Dept. Food Sci., North Dakota State Univ., Fargo, ND, Sept.</p> <p>"Refocusing Human Nutrition Research within USDA", University of Nebraska Medical Center, Omaha, NE, Sept.</p> <p>"Public Parks and Recreation Facilities as Instruments of Public Health", ND Parks &amp; Rec. Assoc., Grand Forks, ND, Sept.</p> <p>"Nutrition and Cancer Risk", Environmental Systems Public Health Workshop, NIH, Bethesda, MD, Sept.</p>   |
| 2009 | <p>"Nutritional Benefits of Pulses and Pulse-Fortified Foods", Northern Crops Inst., Fargo, ND, Oct</p> <p>"The National Obesity Epidemic", Optimist Club, Grand Forks, ND, Jan</p> <p>"A Dakota Diet: Local Foods to Advance Health", ND Local Foods Summit, Bismarck, ND, Jan</p> <p>"Obesity Prevention Research in USDA", 26<sup>th</sup> Annual Nutrition Seminar, South Dakota State University, Brookings, Mar</p> <p>"Agriculture's Stake in Health", Pulse Canada, Winnipeg, June</p> <p>"Overview of Obesity Prevention Research", Undersecretary's Conf., USDA, Washington, DC, Aug</p> <p>"Opportunities for Meaningful Internship Experiences in ARS", ARS, Washington, DC, Sept.</p>  |
| 2010 | <p>"Nutritional Benefits of Pulses and Pulse-Fortified Foods", Northern Crops Inst., Fargo, ND, Oct</p> <p>"Opportunities for Healthy Communities", University of Nebraska Medical Center, Omaha, NE, May</p> <p>"Selenium Metabolism: Relevance to Status Assessment and Anticarcinogenesis", SELECT Biorepository Symp., Dallas, May</p> <p>"Health Significance of mineral components of drinking water", Expert Consultation on Composition of Desalinated Drinking Water, Environmental Protection Agency, Abu Dhabi, May</p> <p>"Linking Agriculture and Health: Collaborative Opportunities", ARS Meat Animal Research Center, Clay Center, NE, May</p> <p>"Obesity: need it kill you?", Grand Forks Citizen's Club, Ft. Myers, FL, June</p> <p>"Agricultural Development, Health and Nutrition: Critical Partners or Weak Allies? ", Assoc. Internat. Agr. &amp; Rural Dev., Washington, DC, June</p> |
|      | <p>"Obesity Prevention Research at the GFHNRC", Medical Grand Rounds, Altru Health System, Grand Forks, Jun</p> <p>"Obesity Prevention Research at the GFHNRC", Optimist Club, Grand Forks, Jun</p> <p>"Welcome", National Nutrient Databank Conference, Grand Forks, ND, July</p> <p>"Comments at Wellness Center Groundbreaking", Grand Forks, Oct</p>  |
| 2011 | <p>"Linking Food Systems and Human Health", North Dakota State Univ., Fargo, ND, Jan</p> <p>"Overview of Research at the Grand Forks Human Nutrition Research Center", Grains for Health Found., Minneapolis, Sept.</p>   |
| 2012 | <p>"Oxidative Stress: Vitamin E &amp; Selenium", California Branch, Assoc. of Reg. Prof. Animal Scientists, Coalinga, CA, Oct.</p> <p>"Biomarkers of Nutrition for Development: Overview of the BOND program", New York Acad. Sci., New York, Apr</p> <p>"Biomarkers of Selenium Status", New York Acad. Sci., New York, Apr</p> <p>"Selenium in Reducing Cancer Risk", Summer Research Forum, North Dakota State Univ., Fargo, May</p> <p>"Linking Agriculture and Human Nutrition", Agriculture/Health/Wealth Convergence Wrkshp, New Delhi, June</p> <p>"Opportunities for selenium-enhanced foods in cancer prevention", Soil Sci. Assoc. America Symp. on Fertilizing for Crop Qualities that Improve Human Health", Cincinnati, OH, Oct</p>   |

**PUBLICATIONS:** 133 peer-reviewed                      14 books  
                          74 reviews, book chapters            134 abstracts  
                          72 technical (non-reviewed)        7 press articles

### Scientific Papers (peer-reviewed)

- Smith, F.F., Webb, R.E. Boswell, A.A. and **Combs, Jr., G.F.** 1970. A circular rotating cage for obtaining uniform oviposition by *Liriomyza munda* in exposed plants. J. Econ. Entomol. 63:655-656.
- Combs, G.F., Jr.** 1972. The engorgement of swarming worker honeybees. J. Apic. Res. 11:121-128.
- Combs, G.F., Jr.** 1972. Studies of food utilization by model honeybee swarms. J. Apic. Res. 11:129-146.
- Noguchi, T., M.L. Langevin, **G.F. Combs, Jr.** and M.L. Scott. 1973. Biochemical and histochemical studies of the selenium-deficient pancreas in chicks. J. Nutr. 103:444-453.
- Combs, G.F., Jr.** and M.L. Scott. 1974. Dietary requirements for vitamin E and selenium measured at the cellular level in the chick. J. Nutr. 104:1292-1296.
- Combs, G.F.** and M.L. Scott. 1974. Antioxidant effects on selenium and vitamin E function in the chick. J. Nutr. 104:1297-1303.
- Combs, G.F., Jr.** and M.L. Scott. 1975. Polychlorinated biphenyl-stimulated selenium deficiency in the chick. Poultry Sci. 54:1152-1158.
- Combs, G.F., Jr.** R. Brewer, N. Williams & R. Richburg. 1975. Dieldrin dilution in field-contaminated broilers. Poultry Sci 54:1713-16
- Combs, G.F., Jr.,** A.H. Cantor and M.L. Scott. 1975. Effects of dietary polychlorinated biphenyls on the vitamin E and selenium nutrition of the chick. Poultry Sci. 54:1143-1152.
- Combs, G.F., Jr.** 1976. Differential effects of high dietary levels of vitamin A on the vitamin E-selenium nutrition of the chicken. J. Nutr. 106:967-975.
- Combs, G.F., Jr.** and G.M. Pesti. 1976. Influence of ascorbic acid on the selenium nutrition of the chick. J. Nutr. 106:958-966.
- Pesti, G.M. and **G.F. Combs, Jr.** 1976. Studies of the enteric absorption of selenium using localized coccidial infections. Poultry Sci. 55:2265-2274.

- Poston, H.A., **G.F. Combs, Jr.** and L. Leibovitz. 1976. Vitamin E and selenium interrelationships in the diet of Atlantic salmon (Salmo salar): Gross and biochemical deficiency symptoms. *J. Nutr.* 106:892-904.
- Combs, G.F., Jr.** 1978. Influence of ethoxyquin on the utilization of selenium by the chick. *Poultry Sci.* 57:210-222.
- Combs, G.F., Jr.** 1978. Studies on the utilization of vitamin E, alcohol and esters by the chick. *Poultry Sci.* 57:223-9.
- Wasserman, R.H., and **G.F. Combs, Jr.** 1978. Relation of vitamin D-dependent intestinal calcium-binding protein to calcium absorption during the ovulatory cycle in Japanese Quail. *Pro.Soc.Exp.Biol.Med.* 159:286-287
- Bunk, M.J. and **G.F. Combs, Jr.** 1979. Use of low viscosity epoxy plastic casts to study mammalian core and mammillary knob organization of avian eggshells. *Poultry Sci.* 58:1340-1344.
- Combs, G.F., Jr.** and M.L. Scott. 1979. The selenium needs of laying and breeding hens. *Poultry Sci.* 58:871-884.
- Combs, G.F., Jr.,** A.H. Parsons and M.B. Ross. 1979. Calcium homeostasis in pullets of two lines selected for differences in eggshell strength. *Poultry Sci.* 58:1250-1256.
- Combs, G.F., Jr.** and J.M. Regenstein. 1980. Influence of selenium, vitamin E, and ethoxyquin on lipid peroxidation in muscle tissues from fowl during low temperature storage. *Poultry Sci.* 59:347-351.
- Bunk, M.J. and **G.F. Combs, Jr.** 1980. Effect of selenium on appetite in the selenium-deficient chick. *J. Nutr.* 110:743-749.
- Peterson, F.J., R.P. Mason, J.L. Holtzman and **G.F. Combs, Jr.** 1980. The effect of selenium and vitamin E deficiency on the toxicity of nitrofurantoin in the chick. In: Microsomes, Drug Oxidation and Chemical Carcinogenesis, eds. M.J. Coon, A.H. Conney, R.W. Estabrook, H.V. Gelboin, J.R. Gillette & P.J. O'Brien, Academic Press, New York, pp 872-876.
- Combs, G.F., Jr.,** S.A. Barrows and F.N. Swader. 1980. Biological availability of selenium in corn grain produced on soil amended with fly ash. *J. Agr. Food Chem.* 28:406-409.
- Combs, G.F., Jr.** and J.M. Regenstein. 1980. Influence of selenium, vitamin E and ethoxyquin on lipid peroxidation in muscle tissues from fowl during low temperature storage. *Poultry Sci.* 59:347-351.
- Poston, H.A., and **G.F. Combs, Jr.** 1980. Nutritional implications of tryptophan catabolizing enzymes in several species of trout and salmon. *Proc. Soc. Exp. Biol. Med.* 163:452-454.
- Combs, G.F., Jr.,** K.T. Mandisodza, W.H. Gutenmann and D.J. Lisk. 1981. Utilization of selenium in fly ash and in white sweet clover grown on fly ash by the chick. *J. Agric. & Food Chem.* 29:149-152.
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- Kingsley, P.B. and **G.F. Combs, Jr.** 1981. Vitamin E activity of  $\alpha$ -tocopherol side chain analogs in selenium-deficient chicks. *Proc.Soc. Exp. Biol. Med.* 166:1-5.
- Coffin, J.L. and **G.F. Combs, Jr.** 1981. Impaired vitamin E status of chicks fed T-2 toxin. *Poultry Sci.* 60:385-392.
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